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Report to the Chairman, Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations, House of Representatives

December 1985

SURFACE MINING

Interior Department Oversight of State Permitting and Bonding Activities

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United States
General Accounting Office
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Resources, Community, and
Economic Development Division

B-220953

December 23, 1985

The Honorable Mike Synar
Chairman, Subcommittee on Environment,
Energy, and Natural Resources
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

This report discusses the Department of the Interior s Office of Surface Mining's oversight of state permitting and bonding activities carried out under the federal Surface Mining Control and Reclamation Act of 1977.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of the report. At that time we will send copies to the Secretary of the Interior. Copies will also be made available to other interested parties upon request.

Sincerely yours,

J. Dexter Peach
Director

Executive Summary

The Surface Mining Control and Reclamation Act of 1977 was enacted to protect the environment from the adverse affects of surface coal mining operations. Twenty-four of the 27 coal states have primary responsibility for developing and enforcing state regulatory programs to control mining within their borders consistent with the standards outlined in the act. Interior's Office of Surface Mining Reclamation and Enforcement (OSM) regulates coal mining in the other three states under federal programs. To assure that state regulatory programs comply with the act, OSM reviews and reports on the states' performance.

At the request of the Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, GAO reviewed, in part, whether OSM's oversight

- provides adequate assurance that state permitting activities are in compliance with the act and
- enables it to determine the adequacy of performance bonds established by state regulatory authorities to ensure reclamation of mined land.

Background

To mine coal, operators must submit a permit application to the state regulatory authority for review and approval. The application must demonstrate that mining operations will meet all prescribed environmental standards and be accompanied by a mining and reclamation plan. The plan must describe the present uses of the land, steps to be taken to prevent environmental damage, and a description of reclamation activities. If the state approves the permit, the applicant must then file a performance bond with the state to ensure that funds will be available to meet reclamation requirements.

State program oversight is a cooperative effort between OSM's Eastern and Western Technical Centers and its 13 field offices. OSM guidance describes the organizational responsibilities for performing the oversight reviews and what is to be reviewed. Using this guidance, the technical centers review state permitting and bonding activities and report their results to the field offices. The field offices use the review results to develop the permitting and bonding sections of their annual reports assessing the state programs.

GAO reviewed the procedures used by OSM in performing its permitting and bonding oversight reviews of eight state regulatory programs. To determine the adequacy of the oversight procedures used by OSM, GAO used the Comptroller General's Standards for Audit of Governmental

Organizations, Programs, Activities, and Functions (1981 Edition). These standards include the need for sufficient and relevant evidence to be obtained and documented in order to provide support for review findings.

Results in Brief

OSM oversight guidance generally outlines the permitting review process and what is to be reviewed, but until recently it did not include detailed procedures on how the reviews should be conducted. This has led to technical center review findings often being dropped when challenged by state regulatory officials and OSM's field office officials. Consequently, it is questionable whether the results of the permitting oversight reviews were giving OSM adequate assurance that state programs were in compliance with the act.

Although OSM has procedures for determining bond adequacy in the three states in which it is the regulatory authority, it has not directed the technical centers to use these or similar procedures in performing bond oversight reviews for state regulated programs.

OSM recognized the need to improve its oversight reviews. During GAO's review OSM drafted new oversight guidelines and detailed procedures. These guidelines and procedures address most of the problems GAO identified. However, they do not establish a standard procedure for performing bond adequacy reviews.

Principal Findings

Permitting Oversight

Until recently, OSM did not have detailed procedures on how technical center reviewers were to conduct the state permitting oversight reviews. Without such procedures, reviewers used different criteria in each state to determine what permits to review and how to select the permits and they prepared and retained little, or no, documentation to support their findings. In addition, technical center findings contained errors or misinterpretations of the state's program and sometimes included deficiencies which states had already corrected in response to previously reported problems.

In seven of the eight states selected for review by GAO this situation often led to the findings of the technical centers' reviews being successfully challenged by the state or OSM field office officials. For example, in the 1984 permitting oversight review period 54 of the 112 Eastern Technical Center findings in three states were dropped and not reported by the OSM field offices in their annual reports. Once deficiencies were accepted, however, the states usually took corrective action.

OSM's draft guidelines and procedures are an important step in correcting the permitting oversight problems identified by GAO because they address such issues as permit selection criteria and findings documentation standards.

Reclamation Bond Oversight

OSM field offices were directed to comment on the adequacy of performance bonds in their 1984 annual reports. To support the field offices, OSM guidance required the technical centers to determine whether the permit applicant submitted the required bond. However, technical center officials told GAO that few detailed calculations were made to determine the appropriateness of the bond amounts. In addition, the technical centers maintained little, or no, documentation on the scope of the reviews made. Because of this, GAO's review relied on the findings presented in the technical centers' 1984 oversight reports. According to these reports, bond adequacy was not addressed in 15 of the 24 states having primary enforcement authority. In those states where the centers did comment on bond adequacy, six states were reported as having insufficient bonds to cover the costs of reclamation.

OSM has developed draft guidelines which will require the technical centers to determine the adequacy of bond amounts for all permits selected for oversight review. However, the guidelines do not address how this determination should be done.

Recommendations

Because OSM intends to monitor the implementation of the draft permitting guidelines during the 1986 oversight reviews and revise the guidelines and procedures where needed, GAO is not making any recommendations on permitting oversight at this time.

The Secretary of the Interior should, however, require OSM to revise the draft bonding oversight guidelines to include standard procedures for determining the adequacy of reclamation performance bonds established under state regulatory programs. (See p. 41.)

Agency Comments

GAO discussed the information obtained during the review with responsible program officials and has included their comments where appropriate. However, GAO did not obtain the views of responsible officials on its conclusions or recommendation, nor did GAO request official agency comments on a draft of this report.

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Abbreviations

GAO	General Accounting Office
OSM	Office of Surface Mining Reclamation and Enforcement
POI	Program Operations and Inspections Directorate
SMCRA	Surface Mining Control and Reclamation Act of 1977
TSR	Technical Services and Research Directorate

Introduction

In 1983 coal mining affected about 1.3 million acres of land in the United States. If unchecked, mining activities can cause substantial damage to the environment, including soil erosion and water pollution, as well as permanent loss of productive land. Beginning in the late 1930's, a number of coal-producing states enacted legislation to control these effects, but these laws afforded widely varying degrees of protection. Finally, in 1977, the Congress enacted the Surface Mining Control and Reclamation Act (30 U.S.C. 1201) to protect society and the environment from the adverse affects of surface coal mining operations. Besides prescribing future mining practices, the act contains provisions for reclaiming abandoned mine lands.

Since coal mining takes place in 27 states, under different mining conditions and practices, the federal Surface Mining Act encouraged the states, rather than the federal government, to assume primary responsibility for regulating coal mining on state and private lands. The Office of Surface Mining Reclamation and Enforcement (OSM) was created within the Department of the Interior to oversee state regulatory program development and implementation and to make reviews as necessary to ensure compliance with the act.

State Responsibility to Issue Mining Permits

The federal Surface Mining Act established (1) a nationwide program regulating coal mining and reclamation operations occurring after August 3, 1977—the date of the act's passage—and (2) the OSM within the Department of the Interior to administer the programs for controlling surface coal mining operations as required by the act. The act specified that because of the diversity in terrain, climate, and other physical conditions, the primary regulatory responsibility for surface mining and reclamation should rest with the states.

If a state wanted to assume exclusive jurisdiction over the regulation of surface coal mining and reclamation operations, the federal Surface Mining Act required the state to submit a plan for a permanent program to the Secretary of the Interior that demonstrated that it had the capability to carry out the provisions of the act. Once a state's permanent program was approved, OSM's role became one of oversight, ensuring that the act's requirements were met.

As of October 1985, 24 of the 27 coal states had primary authority to regulate coal mining on all state and private lands within their borders. These so-called primacy states have each enacted laws that parallel the federal Surface Mining Act and have promulgated regulatory programs

that are consistent with federal law and regulation and have been approved by the Secretary of the Interior. OSM programs are in place in Georgia and Washington—which chose not to adopt their own regulatory programs—and in Tennessee, which relinquished its regulatory authority to OSM on October 1, 1984. In addition to these three states, OSM also regulates coal mine operators on federal and Indian lands.

Permit Application

Before mining coal within a primacy state, mine operators must obtain a mining permit from the state regulatory authority. The mine operators must demonstrate to the state that mining operations will be in compliance with the approved state regulatory program's environmental standards. Among other things, mine operators' permit applications must (1) describe their method of mining, engineering techniques, and equipment to be used, (2) submit maps describing the land affected, (3) determine the probable effects of mining and reclamation on ground and surface waters, and (4) present a statement of the results of test borings or core samples of the permitted area. The permit application must also be accompanied by a mining and reclamation plan that describes the present use of the land, steps that will be taken to prevent environmental damage during mining, a description of reclamation activities that will be carried out once mining is complete, and a per acre estimate of the reclamation cost.

If the state regulatory authority finds that the permit application is complete and accurate and complies with all regulatory program requirements, it approves the application. The applicant must then file a performance bond with the state regulatory authority to assure the faithful performance of all requirements of the approved state program and the permit.

Performance Bond Requirements

Performance bonds are a guarantee that funds will be available so that all reclamation operations are satisfactorily completed in accordance with regulatory performance standards and the mine operators' state-approved reclamation plan.

OSM regulations implementing the federal Surface Mining Act stipulate that the state regulatory authority shall require permits to have adequate bond coverage in effect at all times. Each state having primacy is authorized to establish its own bonding requirements. However, the federal Surface Mining Act states that the bond's amount shall be sufficient to assure the completion of the reclamation plan if the regulatory

authority has to do the work and in no case shall the total bond for the entire area under one permit be less than $10,000.

OSM Oversight of State Performance

Once a state has obtained permanent program approval, the federal Surface Mining Act requires OSM to make reviews as necessary to verify that the state programs approved under the act are being met. To implement this responsibility OSM issued Plans and Procedures for the Evaluation of the States' Permanent Programs on March 5, 1982, to describe the process for the review of the approved state regulatory program. In evaluating the state's performance—commonly termed "oversight"—OSM relies on inspections, program data furnished by the state, data from other sources (individuals, citizen groups, industry), and annual reviews. In addition to an annual report to the Congress on the implementation of the act as required by the federal Surface Mining Act, OSM field offices prepare annual reports on each of the 24 primacy states which OSM submits to interested congressional committees. The first OSM field office annual reports assessing the states programs were issued between June and October 1983.

OSM's Program Operations and Inspection Directorate (POI), through its 13 field offices, is responsible for (1) oversight of all aspects of state regulatory programs (i.e., permitting, bonding, inspections, enforcement, and penalty assessment), (2) developing annual reports summarizing the states' performance, and (3) submitting these reports to the Director, OSM. However, OSM's Technical Services and Research Directorate (TSR), through its Denver and Pittsburgh Technical Centers, assists POI by performing the permitting and bonding oversight reviews in a state and reporting the results to the OSM field office director responsible for monitoring the implementation and enforcement of the state program.

Objectives, Scope, and Methodology

On August 10, 1984, the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, requested that we review two specific problems related to permitting and bonding of coal mining operations. In subsequent discussions with the Subcommittee staff, we agreed to determine whether

- OSM permitting oversight provides adequate assurance that the state programs are in compliance with the federal Surface Mining Act,
- OSM permitting oversight reviews result in corrective action by the states, and

- OSM has determined the adequacy of bonds established by state regulatory authorities to ensure reclamation of mined land.

Our review focused on the procedures used by OSM to assure state program compliance with the federal Surface Mining Act. In doing so, we relied on the generally accepted standards for reviewing compliance with laws and regulations found in the Comptroller General's Standards for Audit of Governmental Organizations, Programs, Activities, and Functions (1981 Edition).

To gain an overall understanding of these issues, we reviewed the Surface Mining Control and Reclamation Act and OSM rules and regulations pertaining to OSM's oversight responsibilities. To verify how OSM implemented its laws, rules, and regulations, we reviewed OSM oversight procedures and guidance and interviewed OSM headquarters, field office, and technical center officials responsible for carrying out this oversight responsibility.

To evaluate OSM's permitting oversight process, we concentrated on the results of OSM's second annual assessments (1984)—the last completed assessment when our review began in December 1984—which were reported between September 1984 and February 1985. We examined the permitting and bonding sections of the OSM field office annual reports summarizing the assessment results for eight selected state programs—Alabama, Colorado, Illinois, Kansas, Kentucky, Maryland, New Mexico, and West Virginia. These states were selected to provide coverage of both large and small coal producing states in terms of the number of permits issued. (See app. I for detailed permit information on all primacy states.)

We also examined the Pittsburgh and Denver Technical Center draft and final permitting oversight reports, working papers, and other files, and interviewed technical center management and supervisory staff, team leaders, and members who performed the state program permitting oversight reviews. This effort provided the basis for determining the scope of work performed by OSM during its annual oversight review of state permitting and bonding activities. We also discussed the technical center review results with state regulatory officials in the eight selected states and with OSM field office officials responsible for monitoring these state programs. These six OSM field offices are located in Charleston, West Virginia; Lexington, Kentucky; Springfield, Illinois; Homewood, Alabama; Kansas City, Missouri; and Albuquerque, New Mexico.

To determine the extent to which OSM permitting oversight findings resulted in corrective action, we determined, through interviews, the actions taken by the states in response to each finding contained in the 1984 OSM field office annual reports. We interviewed state regulatory authority officials in the eight states that we selected and OSM field office officials responsible for following-up on state corrective actions.

To determine whether OSM had evaluated the adequacy of bond amounts to reclaim permitted sites in the event of bond forfeiture, we (1) reviewed OSM and technical center guidance, (2) discussed the scope of work performed during the 1984 technical center oversight reviews with the Pittsburgh and Denver Technical Center staffs, and (3) reviewed special studies performed by the technical centers to determine the adequacy of bond amounts in specific states. In addition, we discussed the procedures for analyzing bond adequacy with OSM headquarters and field office staff and with state regulatory authority officials.

We conducted our field work from December 1984 through August 1985.

We discussed our findings with agency program officials and have included their comments where appropriate. However, as the Chairman requested, we did not obtain the views of responsible officials on our conclusions and recommendation, nor did we request official agency comments on a draft of this report. With these exceptions, our work was performed in accordance with generally accepted government auditing standards.

OSM Permitting Oversight Reviews Lack Specific Guidance

When a state assumes primary enforcement responsibility for coal mining operations within its borders, OSM's role is to assure that the state program is being implemented in accordance with the requirements of the federal Surface Mining Act. To carry out this oversight responsibility with respect to permitting mining operations, the OSM technical centers annually review state permitting activities. Guidance is available on the general review process, but until recently no procedures or standards had been developed on how to conduct the reviews. In addition, technical center findings contained errors or misinterpretations of the state's program or they were based, in part, on permits which were issued before the state could correct previously reported problems. This situation led to technical center findings often being successfully challenged by state regulatory officials as well as OSM's field office officials ultimately responsible for reporting the review results. Consequently, it is questionable whether the results of the permitting oversight reviews were giving OSM adequate assurance that state programs were in compliance with the act. We did find, however, that for those deficiencies that were ultimately reported in OSM field office annual reports, the states generally acted to correct the deficiencies.

The Branch of Technical Assistance and Review, OSM headquarters, recently drafted new permitting oversight guidelines and detailed procedures. The draft guidelines, which will be used in performing the 1986 oversight reviews, are intended to result in greater consistency in terms of focusing reviews on specific compliance issues, selecting permits for review, and communicating the results to the states. The new procedures, including more stringent documentation requirements, are an important first step to improving OSM's oversight of state permitting activities.

Permitting Oversight Review Responsibilities and Process

OSM directives Oversight of the State's Permanent Programs dated November 26, 1982, and OSM Oversight of State Permitting Programs dated January 14, 1983, provide guidance to OSM headquarters, field office, and technical center personnel in evaluating approved state programs. Together, the directives (1) define the various OSM office responsibilities for performing the oversight reviews and (2) outline a general process for conducting oversight of state permitting activities.

OSM Oversight Responsibilities

The OSM Oversight of State Permitting Programs directive assigns organizational responsibility for reviewing state permitting activities and provides broad guidance on the activities to be reviewed. However, the

directive does not provide specific guidelines or procedures for performing the reviews.

Under the directive, the Technical Services and Research Directorate (TSR), in cooperation with the Program Operations and Inspections Directorate (POI), is responsible for developing

"... national standards for conducting the oversight reviews and evaluations of state permitting, developing to the extent possible standardized reporting methods and data collection procedures, and insuring that the permitting reviews are conducted in a manner that is consistent with national standards."

On July 18, 1984, OSM convened a Steering Committee composed of OSM headquarters, technical center, and field office staff members. The Committee's major goals were to more clearly define permitting oversight responsibilities and, to the extent possible, provide nationwide standards and methods for permitting oversight. The Committee's products, a draft directive and guidelines completed on September 4, 1984, were not implemented by OSM. According to the Committee Chairman, the TSR considered the guidelines too detailed, restrictive, and binding. However, the head of OSM's Permitting and Environmental Analysis Division advised us on April 3, 1985, that the Steering Committee document emphasized to agency management that a definition of oversight and a set of guidelines were necessary.

OSM headquarters and technical center officials including the TSR's assistant director; the Chief, Environmental Analysis Branch, Eastern Technical Center; and the Administrator, Western Technical Center, told us that the agency has not developed standard permitting oversight procedures on how to perform the reviews. They advised us that OSM has no procedures or standards for reviewers to follow on what permits are subject to review, how to select permits for review, how to examine individual permits, and how to document the review.

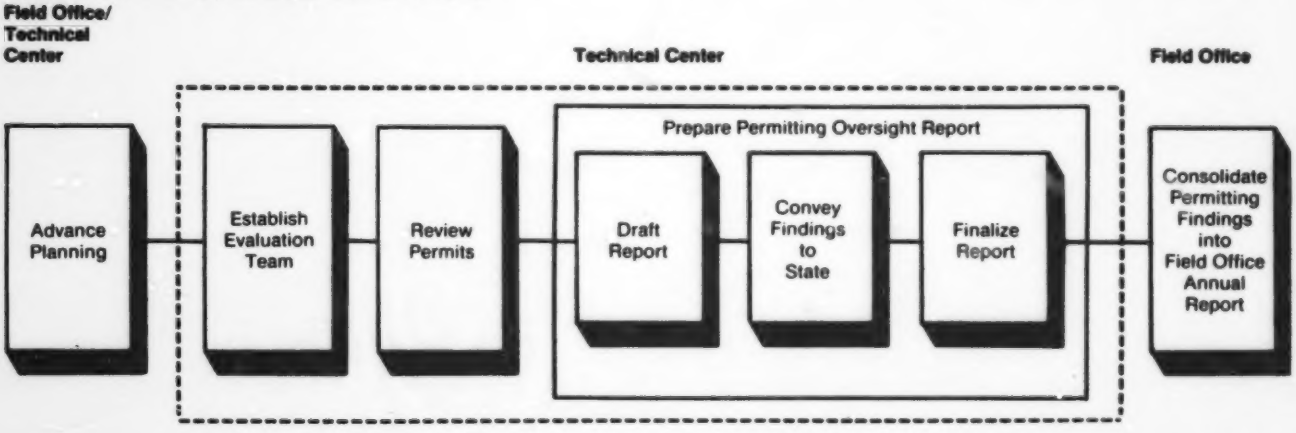
Permitting Oversight Process

Both the Eastern and Western Technical Centers in their second annual permitting oversight reviews used OSM's November 1982 and January 1983 directives. Also, the Western Technical Center supplemented the directives with Western Technical Center State Programs Oversight Procedure. This document provided additional detail on the Western Technical Center's oversight role and review procedures. Although this

resulted in the two Centers using different review processes, the two processes contained essentially the same review steps.

OSM's annual permitting oversight reviews are scheduled by the POI over several months to facilitate report processing at OSM headquarters. This phasing results in non-standard review periods and reporting dates for each of the 24 primacy states. (See app. II for specific dates key activities were completed during the second annual assessment.) Figure 2.1 summarizes the permitting oversight process and identifies the OSM office responsible for performing the indicated activity.

Figure 2.1: Permitting Oversight Review Process



Advance Planning

Initial contacts with a state regulatory authority are conducted by an advance team. The team, whose composition is based upon the agreement of the technical center administrator and the field office director responsible for monitoring the state's activities, consists of at least one staff member from each of these offices. The technical center administrator appoints one team member as team leader.

The advance team first meets with the responsible OSM field office to formulate a strategy for the review and to identify issues and other matters for discussion with the state regulatory authority. Meetings are then held with the state regulatory authority to (1) discuss the scope, procedures, and schedule to be followed, (2) gain an insight into the state's organization and management and determine the status of the state's permitting activity, and (3) identify permitting issues/problems. The information thus obtained is used in preparing an evaluation plan

and providing guidance for the technical center permitting oversight review. The evaluation plan contains a draft work plan covering the scope and depth of the review, proposed detailed schedules for performing the work and reporting the results, and recommendations on the technical specialties required to perform the review.

Evaluation Team

Where resources permit, the evaluation team consists of the advance team members and other technical center staff as appropriate. The team varies in size and technical discipline according to the nature of the issues and problems identified by the advance team. However, the team is expected to be multidisciplinary in nature (i.e., hydrologists, geologists, agronomists, etc.) and consist of a core of four to five people. Upon completion of work in one state, the evaluation team is disbanded and its members reassigned.

The evaluation team evaluates the adequacy of a state's permitting activity, documents significant accomplishments, and prepares an evaluation report. The team also identifies specific areas where a state's permitting activity may need to be modified and suggests alternatives to resolve identified issues and problems.

Review Permits

The evaluation team performs a complete examination of a selected number of permits. In the east, these examinations are performed at the state regulatory authority, whereas in the west, the permit files are reviewed at the Western Technical Center. The average team visit or review is expected to be 1 to 2 weeks, with the potential for some follow-up inquiries to clarify any unresolved issues.

In the absence of specific procedures as to how the permits should be selected, the number of permits to be reviewed is jointly determined by the technical center and the field office. The permit review includes an evaluation of the state's adherence to all applicable procedures for the review and approval or disapproval of permit applications including the requirements for notice and public participation. The review also includes an assessment of whether the state regulatory authority has made all required findings such as: the permit area has not been designated unsuitable for mining; the applicant has submitted all abandoned

mine land reclamation fees; and the proposed mining activity will not affect endangered or threatened species.

Preparation of Technical Evaluation Report

The technical center evaluation teams prepare a draft report summarizing the results of the state's permitting activities for the review period and send the report to the field office directors for comment. In the east, field office directors generally provided the draft reports to the state regulatory authorities for comment. Although Eastern Technical Center procedures did not provide for any post-review contact between the technical center staff and the state regulatory authorities, technical center and field office officials generally discussed the permitting oversight findings with state regulatory officials. In the west, the technical center staff conduct a findings conveyance meeting with state regulatory officials to discuss the oversight findings.

After evaluating comments received from OSM field office and state regulatory officials, the technical centers provide to the field office directors a final written report on the state's permitting activities.

Field Office Annual Report

The OSM field office consolidates the technical center's permitting oversight findings into the field office annual report, which documents the state's performance in implementing and maintaining its approved regulatory program. The report is sent to the Director, OSM, and submitted to interested congressional committees.

Technical Center Evaluations Varied From State to State

The permitting oversight reviews performed by the technical centers and reported in 1984 varied from state to state. Generally accepted government auditing standards cite the need for sufficient, competent, and relevant evidence to be obtained and documented in order to provide support for findings, judgments, and conclusions, and to enable demonstration of the nature and scope of the review work. Without such standards or clear procedures how to perform these reviews, OSM technical center reviewers

- used different criteria in each state to determine what permits are subject to review and to select permits for review and
- prepared and retained little, or no, documentation to support their findings.

Different Review Populations and Approaches to Selecting Permits for Review

Before the technical center permitting oversight reviews were conducted, the advance teams determined the scope of the review for each state. Lacking specific guidance, other than that the average evaluation should be 1 to 2 weeks, the advance team and the field office director jointly determined the universe of permits subject to review and how many and which permits to review. Permitting activities that could be considered in this universe include repermits, new permits, exploration permits, renewals, revisions, and transfers which involve surface mines, underground mines, coal preparation plants, and support facilities.

Table 2.1 shows the permit population and the number of permits reviewed during the technical centers' second permitting oversight reviews. As shown, the percentage of permits reviewed ranged from 4.4 percent in West Virginia to 100 percent in five western states. (Note: The permit population in Texas was two; however, the OSM technical center selected an additional permit for review from outside the population review period.) The lower percentages for eastern states can be explained by the fact that, according to Eastern Technical Center officials, only 20 to 30 permits can be reviewed within the 2-week OSM review period.

Table 2.1: Permits Reviewed by OSM Technical Centers for 1984 Oversight Reviews

State	Permit Population	Permits Reviewed	Percent
Alabama	124	21	16.9
Alaska	0	0	•
Arkansas	9	7	77.8
Colorado	12	3	25.0
Illinois	36	14	38.9
Indiana	99	21	21.2
Iowa	2	2	100.0
Kansas	2	2	100.0
Kentucky	165	28	17.0
Louisiana	1	1	100.0
Maryland	7	6	85.7
Missouri	7	5	71.4
Montana	2	2	100.0
New Mexico	0	0	•
North Dakota	8	2	25.0
Ohio	103	30	29.1
Oklahoma	5	2	40.0
Pennsylvania	91	24	26.4
Tennessee	39	9	23.1
Texas	2	3	100.0
Utah	0	0	•
Virginia	492	30	6.1
West Virginia	679	30	4.4
Wyoming	6	2	33.3
Total	1,891	244	12.9

Sources: 1984 technical center permitting oversight reports. Advance team reports preceeding 1984 technical center reviews. Second field office annual reports.

Items included in the review population varied for the eight states we reviewed. In some states all permitting activities during the review period were included whereas in others certain permitting activities such as repermits and exploration permits were excluded. In addition, in some states applications were included. The following examples illustrate the alternative approaches used by the technical center and field office staffs in defining the review population in the eight states we reviewed.

- In Illinois, the field office director included all of the state's permitting activity for oversight review. This included at least one permit not yet issued, one amended permit not yet issued, and one major revision to a

previously issued permit; it also included permits for underground and surface mines and permits for carbon recovery operations.

- In Kansas, the technical center project leader told us that the reviewable population included two new permits issued for surface mining. She said that two processing facility permits were not included because the technical center was emphasizing surface mining; permit amendments and exploration permits were not included because the technical center did not have the staff or time to perform this additional work.
- In West Virginia, the former field office director defined the reviewable population. He included 526 permits issued after West Virginia attained primacy on January 21, 1981, and 153 permits for coal exploration operations and excluded 676 permits issued during the review period to repermit operations that predated primacy. The former director said that he saw no purpose in reviewing these permits because the state regulatory authority had revised its permitting process and the results of any repermitting review would have no value in shaping the future of state permitting.

Likewise, the procedures used to select permits for review from the population varied. We found that no consideration was given to excluding permits issued before the states could take corrective action on deficiencies reported in the first OSM field office annual reports. Thus, the technical centers' limited resources were being used to review permits that did not reflect the current state practices.

Rather than selecting a sample to provide sufficient information so that inferences could be made concerning the characteristics of the population, Eastern Technical Center officials told us that the sample selected was only to be used to develop trends. In seven of the eight states we reviewed, the method used by the technical centers to select permits for review varied as shown in table 2.2. New Mexico was excluded because the state had not completed any permitting actions on new permit applications or permit reapplications during the review period.

Table 2.2: Permit Selection

State	Method Used
Alabama	The team leader selected 30 permits by drawing permit numbers from a hotel ice bucket. After the selection, 2 of the 30 were replaced at request of the field office director. (The field office had performed a review of the two permits but wanted to see how its results compared with those of the technical center.) A secondary selection followed in which the team began to review the modified sample of 30 permits, but the team leader decided that the first 21 showed adequate permitting trends for reporting purposes.
Colorado	Three permits were selected for review: two issued during the review period and one permit issued before the beginning of the review period. None of the nine repermits issued during the oversight period were reviewed. The Western Technical Center project leader for Colorado told us that the technical center did not make a special effort to review repermits. He added that there is no standard method used to select permits to review during oversight.
Illinois	Fourteen permits were selected to provide information on specific issues (such as prime farmland restoration) identified by the field office director.
Kansas	Both permits considered part of the reviewable population were selected.
Kentucky	Twenty-eight permits were selected for review based on a random selection by computer.
Maryland	The technical center selected and reviewed all seven permits issued by the state during the review period. Later, however, the technical center learned that it had not been provided a complete permit for one mining operation. Therefore, the oversight review findings were based on six permits.
West Virginia	The team leader selected 30 permits by drawing permit numbers from a hotel ice bucket.

This unstructured approach to defining the scope of the technical center permitting oversight reviews has resulted in work being performed which, according to two field office directors, did not reflect the status of the current state program.

- The Director of the Birmingham Field Office, in commenting on the results of the technical center's review of 21 Alabama permits, stated

that the report did not reflect an accurate picture of the state's permitting procedures. Because the 21 permits were issued before Alabama had an opportunity to correct deficiencies previously reported by the OSM field office in its September 1983 annual report, the director requested a second review of eight permits issued subsequent to the date he believed corrective action could have been completed.

- In West Virginia, the technical center reported eight separate types of deficiencies concerning adequacy and completeness of the permit applications approved by the state. The field office's annual report stated that most problems concerning adequacy and completeness had been resolved by modifications to the permit form in July 1983 and March 1984. The former Director of the Charleston Field Office stated that the detailed review of permit applications by the technical center on the old form was not a useful exercise.

Documentation Not Available

Documentation available at the Eastern and Western Technical Centers supporting their review of state permitting activities was primarily limited to entries on a review checklist in the east and handwritten notes in the west. Little documentation was available at either technical center to determine the adequacy of the work performed or the basis for the deficiencies reported.

Eastern Technical Center evaluation teams used checklists, making entries to record the results of their reviews. Evaluation team members in the Western Technical Center, however, made personal notes for their use and produced little formal documentation which was retained by the technical center. There was also little documentation for changes between the draft and final technical center permitting oversight reports. The technical center made major changes to the Kentucky and Illinois reports, among those we examined. The only support for the Kentucky report changes was copies of the state regulatory authority's written response to the draft report and the OSM field office's analysis of this response. There was no explanation of why the technical center made the changes. The only documentation of the changes to the Illinois report was a marked-up copy of the draft which did not indicate why the technical center made changes.

POI's acting assistant director said that the lack of documentation affected the credibility of technical center reports. For example, the Eastern Technical Center reported deficient subsidence control plans for four underground operations in Kentucky. The field office did not report this information in its annual oversight report because the technical

center could not provide sufficient details to allow the field office and the state regulatory authority to agree on the nature of the problem and the appropriate action to be taken.

Technical Center Findings Often Challenged and Dropped

The results of the technical centers' permitting oversight reviews in the eight states we reviewed were often successfully challenged by state regulatory officials as well as OSM field office officials. The Eastern Technical Center dropped many of its findings after comments were received on its draft reports. In addition, the OSM field offices in the east did not report all of the remaining technical center findings in their annual reports. Unlike the Eastern Technical Center, the Western Technical Center resolved many of its findings through discussions with the state regulatory authority before the draft reports were prepared.

Seven of the eight states included in our review challenged the results of the technical centers permitting oversight reviews. The challenges basically fell into the following three categories:

- Reported deficiencies were incorrect because of errors made by the technical center reviewer. The permits were correct as issued by the states.
- Reported deficiencies resulted from the technical center reviewer's misinterpretation of the state's program.
- Reported deficiencies related to permits processed on old forms. The forms were corrected in response to OSM's first field office annual reports.

The Kansas state regulatory authority did not challenge the accuracy of the OSM field office annual report. Rather, Kansas officials pointed out that changes were being made in the state's permitting process and that these changes would generally eliminate the OSM-reported problems.

The following examples illustrate the extent to which technical center findings were challenged by the states and eventually dropped by the technical center in its final permitting oversight reports and the extent to which the OSM field offices used the technical center findings in preparing their annual reports. (We did not, as part of this review, attempt

to determine the technical merit of the OSM findings or the reasonableness of the disposition made of these findings.)

Alabama

The Eastern Technical Center's draft report, dated February 3, 1984, identified 42 deficiencies in the 21 permits reviewed. These deficiencies involved information not submitted by the applicant because the state permit application form did not require this information, inadequate hydrology and mapping data, and sedimentation pond design.

In commenting on the technical center draft report, OSM's Director of the Birmingham Field Office said that the report did not reflect an accurate picture of the state's permitting procedures because the permits examined were issued before Alabama had an opportunity to correct deficiencies previously reported in the field office's September 1983 annual report. He also said that the report failed to distinguish between deficiencies that must be corrected and suggestions for actions to strengthen the program. He therefore requested the technical center to perform a limited review of eight permits issued after the state should have had an opportunity to correct the previously reported deficiencies. The technical center reviewed the eight permits focusing only on hydrology/geology and mapping requirements and sedimentation pond design plans and identified 39 deficiencies that were similar to those identified in the 21 permits.

In commenting on the 39 deficiencies found by the technical center, the state regulatory authority disagreed with all but 2 of the deficiencies. On May 15 and 16, 1984, state regulatory authority personnel met with OSM field office and technical center staff to discuss the technical center findings. A summary of this meeting, prepared by a field office representative, indicated that, after discussion, the technical center could support only eight deficiencies. For example, 15 deficiencies concerning sedimentation pond design were considered unsupported. The technical center contended that the information contained in the permit applications was insufficient to determine the adequacy of the design. In each case, the state was able to show OSM that it had made sufficient calculations or reviews to validate the design of each pond.

Kentucky

The Eastern Technical Center draft permitting oversight report identified 47 deficiencies in the 28 approved permits reviewed. After receipt of field office and state regulatory authority comments, the technical

center eliminated 19 of the 47 deficiencies. The following are examples of those changes:

- The draft reported that two of four permits relating to steep-slope conditions did not contain information necessary to demonstrate compliance with state regulations; the other two permits had deficiencies in static-safety-factor calculations. The states response to the technical center draft report responded to each of these cases by stating that either the application complied with the regulations or that the cited regulation did not apply to these permits. The field office director advised the technical center that further investigation was needed to verify the accuracy of its finding. The technical center agreed with the state.
- The draft reported that 26 of 28 applications with proposed excess spoil-fills contained appropriate stability analyses. The state reviewed the two applications in question and disagreed with the technical center stating that all permits contained the appropriate stability analyses. The field office director informed the technical center that this finding should either be confirmed or dropped. The evaluation team leader decided to drop this point, because it was in error.
- The draft reported that there was little evidence that the state regulatory authority adequately considered identification and protection of threatened and endangered species and their habitat. The final report cited supplemental information provided to OSM by the state in response to the technical center draft report and concluded that the state regulatory authority was adequately meeting the regulatory requirement.

In preparing the field office annual report for Kentucky, the field office dropped nine of the deficiencies reported by the technical center and revised 10 others. The following are examples of deficiencies reported in the technical center final reports which were omitted or revised by the field offices in their annual reports.

- The technical center reported that 12 plans for handling toxic material were deficient; the field office reported toxic material handling plans were adequate except for two plans dealing with haul-road-only applications. The Lexington Field Office made this change because the technical center was considered to have incorrectly interpreted the state's regulations concerning disposal of toxic material.
- The technical center reported deficiencies dealing with subsidence control plans for four underground mines. The field office did not report this information because the technical center could not provide sufficient details to allow the field office and the state regulatory authority

to agree on the nature of the problem and the appropriate action to be taken.

Maryland

The Eastern Technical Center identified 26 deficiencies based on its review of 6 permits. These deficiencies included (1) all required information not included on permit application form, (2) cultural and historic preservation information not included in application, and (3) inadequate geological and hydrological information. Although the state disputed many of these deficiencies reported in the technical center draft report, the technical center reported the same 26 deficiencies in its final report. However, the field office did not report 14 of the technical center deficiencies in its annual report. According to the Charleston Field Office official responsible for revising the draft field office annual report, many of the points which the state disputed were omitted in the field office annual report because the field office staff did not believe the evidence was strong enough to support the point. A field office staff member who contributed to the annual evaluation of the Maryland program also told us that deficiencies were excluded because the field office believed they were not very important, were incorrect interpretations of the Maryland law and regulations, or appeared in only one of six permits reviewed by the technical center and therefore may not have been significant.

Actions Taken to Correct Oversight Findings

The Chief, Permitting and Environmental Analysis Division, OSM headquarters, told us that OSM does not have a written policy on actions to be taken when deficiencies are identified in permits reviewed. He said that OSM's practice was to require states to only correct deficiencies in issued permits that would adversely affect health or the environment. The Eastern Technical Center Administrator told us that the technical center's point of view was forward looking, i.e., correcting systemic permitting problems in the states rather than enforcing correction of specific deficient permits. The Western Technical Center Administrator acknowledged that OSM does not always enforce corrections of deficient permits and does not have a consistent approach to making states correct these deficiencies. OSM field office personnel described corrections made to the permitting processes in the eight states included in our review.

OSM Does Not Require Corrective Action in All Instances

Although OSM has no written policy, its practice is not to require the states to go back and correct permit deficiencies that are considered to be administrative in nature. However, the Assistant Director, Technical Services and Research told us that OSM usually requires states to correct deficiencies that have an environmental impact. The Chief Permitting and Environmental Analysis Division told us that most permitting deficiencies cited by the technical center review teams are technical or administrative deficiencies and not potentially harmful to the environment. No distinction, however, is made between environmental and administrative deficiencies in either the federal Surface Mining Act or OSM policies.

The Chief, State Programs, OSM headquarters told us that when a noted deficiency was considered to be sufficiently serious, OSM required the state to correct the permit. For example, the Kansas state regulatory authority hired a contractor (OSM grant of $25,000) to review 3 of its 17 previously approved permits for technical adequacy. As a result, the state regulatory authority is requiring the companies to correct the deficiencies that the contractor identified in these permits.

Another example of corrective action on permits occurred in Kentucky. Half of the permits in the technical center's permitting oversight sample included waivers of groundwater monitoring requirements based on the concept of geologic isolation. This concept holds that water affected by mining is isolated from that in acquifers used by others by impermeable strata of rock, clay, or shale. OSM did not believe the waivers were supported by the limited information included in the permit files; furthermore, OSM believed that even in those cases where the monitoring waivers were valid, Kentucky rules did not allow the state to excuse the applicant from collecting and reporting pre-mining water data. Resolving this issue involved OSM, citizen complaints to OSM, a lawsuit, and the state regulatory authority. The lawsuit was settled in September 1984 when the state promised to apply new hydrology guidelines during mid-term reviews for all permits with groundwater monitoring exemptions and to require corrective action in all cases of noncompliance.

OSM did not require the states to correct deficiencies in individual permits that they considered to be minor. For example, OSM's Charleston Field Office reported that the documentation of permitting decisions was not adequate in all West Virginia permit files. In discussions with West Virginia regulatory officials, we were told that the state had begun to document these matters in its permits but had no plans to correct

documentation for applications that were formerly approved. In Kentucky, the permit application form failed to request the applicant to identify interests in contiguous lands. OSM did not ask the state to go back and correct deficient permits; rather, OSM asked Kentucky to amend its form so that information would be obtained for new permit applications.

States Efforts to Correct Reported Deficiencies

Our review in eight states showed that those deficiencies that are reported in OSM field office annual reports are generally acted upon by the states. Based on deficiencies cited in the 1984 field office annual reports for the eight states reviewed and discussions with OSM field office and state regulatory officials, we identified 69 deficiencies (including 9 repeated from the 1983 reports) that required corrective action by the states. Based on interviews with state and OSM field office officials and, in some cases, documentary evidence, we found that the states had taken or were taking corrective action on 58 of the 69 deficiencies. The actions taken ranged from revising the permit application form to agreements with the state to review and revise the state regulations.

Of the remaining 11 findings, 6 were resolved by OSM and the states without any specific corrective action being taken; the other 5 items still remained open issues as of June 1985. Of the six deficiencies resolved without specific state action,

- Three were resolved by agreement that the cited problems were isolated occurrences with no programmatic cause. For example, in Alabama the field office reported that 15 accidental nonsystematic information omissions were scattered among the 21 permits reviewed, but each omission was found in only 1 to 3 permits. In Maryland, OSM reported a series of deficiencies relating to the operating and/or reclamation plans in permit applications, but each deficiency occurred in only one permit reviewed. A Charleston Field Office official responsible for preparing the Maryland report told us that these items did not require any corrective action.
- Three were resolved without corrective action because OSM agreed with the states that the findings were not valid as stated. According to documentation at the field offices, this agreement generally occurred as OSM developed, or was provided with, additional information after the final field office report was issued. For example, the final OSM field office annual report on the Illinois program reported that not all permit applications included the surface and groundwater data required by state

regulations. The report acknowledged that, in most cases, the state regulatory authority developed the necessary data from other sources, but stated that the authority needs to require the applicant to address all application requirements. The state regulatory authority responded that another of its regulations allows applicants to rely on data already in the authority's possession to comply with certain application requirements, including surface and groundwater data. OSM concurred that the state had acted properly.

The rationale for not taking corrective action on the remaining five deficiencies was as follows:

- Four deficiencies remained unresolved because the field offices or technical centers believe the issues need further review. For example, the Western Technical Center leader for the Colorado oversight report told us that recent review findings show improvements in three areas reported as deficiencies in 1984, but they remain as minor problems and a conclusion cannot be reached that the deficiencies are corrected.
- One deficiency in Illinois reported by the OSM Springfield Field Office remained unresolved. This deficiency related to approving permit revisions. Although OSM regulations require public notice and participation when a "significant revision" is made to a permit, OSM has not issued guidance as to what is a significant revision. The problem arose when the state approved a permit revision, which it did not consider significant, without public notice and comment. The Springfield Field Office disagreed with the state and insisted that the state treat the revision as a significant change. The field office reported that the state complied in this case, but the general problem had not been fully resolved. While the problem was being analyzed, the field office reported that it would closely review state determinations that changes to mining and reclamation plans were not significant and that it would discuss particular revisions with the state.

OSM Actions to Improve Oversight Review Process

The Assistant Director for Technical Services and Research, the Acting Assistant Director for Program Operations, and other OSM headquaters and technical center officials told us that the permitting oversight process needed to be strengthened to provide better and more accurate information. According to these officials, changes were made in the third annual technical center permitting oversight reviews that were reported on in 1985. These changes included improving communication between OSM and the state regulatory authorities, incorporating mine

site visits in the annual review process, and improving relations between the OSM technical center and field office staff.

During our review, the Technical Assistance and Review Branch, OSM headquarters, drafted new guidelines and detailed procedures which the Branch Chief told us are being used to perform the 1986 technical center permitting oversight reviews that began in mid-October 1985. These draft documents, dated September 5, 1985, state that formal permitting evaluation criteria require the employment of rational, objective, and precise techniques to achieve a credible and defendable evaluation. The stated intent of the new guidance is to foster greater consistency in terms of focusing evaluations on specific issues, selecting permits for review, review techniques, and communication of results to the states. Although each state permitting evaluation will consider differences in mining conditions within the state, the planning, procedures, and methods of conducting all phases of the evaluation will be the same for each state.

The draft guidelines and procedures address most of the issues raised in this report including the need to fully document the oversight reviews. The population and sample selection process will be standardized. The population will consist of permitting actions, a term to be defined, according to the Chief, Branch of Technical Assistance and Review, in a definitions section which had not been completed as of the September draft. The number of permitting actions to be reviewed in each state will be determined based on the number of permitting actions taken by that state during the review period. These permitting actions are to be randomly selected from among those in the population.

The permit review will be segmented into an administrative completeness review and a technical evaluation. Administrative completeness will be determined for each permit in the sample and will determine only whether the required information is present, not its technical adequacy. The technical evaluation will determine the state regulatory authority's adherence to applicable procedures for a limited number of selected areas in each of the permits reviewed. Both of these reviews are to be fully documented and the results discussed with state regulatory officials to assure accuracy of the data and the validity of the issues derived in the evaluations. If deficiencies are identified, the evaluation team must determine and make recommendations "on whether or not the deficiencies warrant corrective action on permits previously issued or merely resolution during the issuance of permits in the future."

The draft guidelines also outline the communications that are to be carried out between the OSM technical centers and field offices and the state regulatory authorities. The guidelines require interaction between the permit evaluators and the state regulatory officials during the permitting oversight reviews; a close out meeting between the reviewers and the regulatory authorities; submission of a draft report to the OSM field offices for comment; submission of a draft report, as amended, to address the field office concerns to the state regulatory authorities in advance of meetings to discuss reported deficiencies; and submission of a final report prepared after OSM field office and state regulatory authority review and comment.

The Chief, Technical Assistance and Review Branch, told us that the draft guidelines will not be finalized this year. Instead, the draft guidelines are being used to perform the 1986 permitting oversight reviews. The reviews will be monitored to determine whether changes are needed to improve the guidelines. He said that other efforts to ensure a uniform application include: (1) OSM headquarters participation in the advance planning phase, (2) OSM headquarters review of the technical center's draft permitting oversight reports prepared after the findings are conveyed to the state regulatory authorities, and (3) increased management oversight and attention to the process.

Conclusions

OSM has been performing annual oversight reviews of state permitting activities since 1983 to determine compliance with the federal Surface Mining Act. Although the Agency had written guidance on the organizational responsibilities for performing these reviews and on what the review should encompass, it had not developed procedures or standards for reviewers to follow in making the reviews. Because there were no procedures prescribing specific methods to be followed nor standards for determining the adequacy of the evidence needed to support the conclusions or recommendations reached or for documenting the work performed, the deficiencies the technical centers identified were often dropped when challenged by state or OSM field office officials. As a result, it is questionable whether the permitting oversight reviews were giving the Agency adequate assurance that the state programs were in compliance with the act.

OSM recognizes that its oversight review procedures need to be improved and has taken steps to improve them. Recently, the Agency drafted new oversight guidelines and detailed procedures for conducting permitting oversight reviews. These draft guidelines and procedures address the

problems that we identified in OSM's permitting oversight reviews. Because the agency intends to monitor the implementation of the draft guidelines during the 1986 oversight reviews and revise the guidelines and procedures where needed, we are not making any recommendations at this time.

OSM Technical Centers Lack Guidance for State Reclamation Bond Reviews

The federal Surface Mining Act requires mine operators to post a bond to assure that mined lands will be adequately reclaimed. States, in order to obtain primary regulatory authority, had to develop bond setting systems that would be no less effective than those prescribed by the act. However, OSM is not in a position to determine whether the bonds established under these state systems are adequate to reclaim mined lands. Without national guidelines or standards, OSM technical center evaluation teams lack direction on what should be evaluated and how to do it. OSM technical center 1984 permitting oversight reports did not address the adequacy of bond amounts in 14 of the 23 primacy states with active coal mining. In those cases where the center did comment on bond adequacy, six states were reported as having inadequate bonds.

OSM has developed draft guidelines that will require the technical centers to determine whether the bond amounts are adequate for all permits selected for oversight review. However, the guidelines do not include standard procedures for performing this evaluation nor criteria to assist the reviewer in deciding whether the bond amount is adequate.

Performance Bond Requirements

Prior to the enactment of the federal Surface Mining Act in 1977, cumulative damages to the environment stemming from coal mining could cost as much as $53 billion to correct, according to an OSM study[1] . Soil erosion, water pollution, damage to fish and wildlife habitat, hazards to public health and safety, and reduction in property valuation are some of the problems attributed to surface and underground coal mining and processing activities.

To assure that future coal mining operations are carried out in an environmentally acceptable manner, the federal Surface Mining Act requires the mine operators to post a performance bond to assure the faithful performance of all requirements of the act and the mining permit. The amount of the bond required should depend on the reclamation requirements of the approved permit; should reflect the probable difficulty of reclamation giving consideration to such factors as topography, geology of the site, hydrology, and revegetation potential; and should be determined by the regulatory authority. The amount of the bond should be sufficient to assure the completion of the reclamation plan if the work had to be performed by the regulatory authority in the event of forfeiture and in no case shall the bond for the entire area under permit be less than $10,000.

[1]OSM, Final Environmental Statement OSM-EIS-2, 1980, p. III-25-III-27.

States, to obtain primary enforcement authority, had to develop bond setting systems no less effective than that prescribed by the federal Surface Mining Act. Nineteen of the 23 primacy states that have active coal mining (Mississippi has no active coal mining) generally mirrored the performance bond requirements of the OSM regulations implementing the act. However, the states use several different procedures to calculate bond amounts. For example, Colorado sets bonds according to the greatest amount of land that may be disturbed by mining operations at any given time; basing the amount on third-party costs and including costs for in-house contract administration. Kentucky sets bond amounts using a "per acre" method taking into account the total permit area rather than the area of maximum disturbance.

Bonding Oversight Review Policy and Procedures

OSM permitting oversight directives Oversight of the State's Permanent Programs and OSM Oversight of State Permitting Activities provide limited guidance to OSM headquarters, field office, and technical center personnel in evaluating performance bonds established under the approved state programs. With respect to bonding, the first directive states that an examination will be made of performance bonds, that is, whether bond amounts, bond releases, and bond forfeitures are in compliance with the state's approved program and the requirements of the federal Surface Mining Act. The second directive, which outlines the methods and procedures to be followed by the technical center evaluation teams, simply states that the evaluation team's review of the state permitting activities is to include whether ". . . the applicant has submitted the required performance bond . . . ." No further guidance is given in these directives to assist technical center reviewers.

OSM has not established procedures for determining minimum acceptable bond amounts. OSM has not issued any procedures or criteria by which to measure whether the bond amounts established by the states are adequate to reclaim the mined lands to their pre-mining condition.

Notwithstanding the limited guidance given to the technical center staff responsible for performing the bonding oversight reviews, the field offices were asked to comment on the adequacy of bonds to cover the cost of reclamation in their 1984 annual reports.

Adequacy of Performance Bonds Not Always Determined

The technical centers did not evaluate the adequacy of performance bonds in 14 of the 23 primacy states with active coal mining. The administrators of both technical centers agreed that evaluating bond adequacy was one of their functions, but disagreed as to whether this evaluation should be part of the permitting oversight review.

Technical Center Annual Bonding Oversight Reviews

The Administrator, Eastern Technical Center, told us that the purpose of bonding oversight was to determine whether bonds are set in accordance with approved state programs. He told us that determining the adequacy of bond amounts was a valid center function but independent of the annual oversight review. The Chief, Economic and Environmental Analysis Division/Eastern Technical Center, agreed that oversight was not to determine whether bonds were adequate to complete reclamation.

In contrast, the Administrator, Western Technical Center, told us that determining whether bonds are adequate to complete reclamation was part of the annual oversight review and is included in the Center's oversight procedures. These procedures state that the technical center will monitor the state's technical and administrative process for establishing bonds, tracking bond status, handling bond forfeitures, and releasing bonds. Among the items that these procedures indicate may be included in this review are bond-level adequacy determinations, but the procedures are silent on how this should be done.

The technical centers maintained little documentation supporting the 1984 bonding oversight reviews and technical center and field office officials responsible for performing the reviews and reporting on the results could not recall the scope of work performed in each state. Therefore, we were unable to determine what the evaluation teams did in making these reviews. However, technical center officials told us that reviewers did very little detailed calculation to verify the appropriateness of bond amounts. Therefore, our review was limited to reviewing that information which was available in the technical center permitting oversight reports and/or the field office annual reports.

According to technical center reports, the work performed in 19 of the 23 primacy states with active coal mining varied as shown in table 3.1. In 9 states the technical centers assessed whether the bond was adequate to reclaim the land whereas in the 10 remaining states the review was limited to an assessment of the state's bonding process.

Table 3.1: Scope of Technical Center Bonding Oversight Review

	Adequacy	Process
Eastern Technical Center		
Alabama	X	
Illinois		X
Indiana		X
Kentucky		X
Maryland		X
Ohio		X
Pennsylvania		X
Western Technical Center		
Arkansas	X	
Colorado	X	
Iowa	X	
Kansas	X	
Louisiana	X	
Montana		X
New Mexico		X
North Dakota		X
Oklahoma	X	
Texas		X
Utah	X	
Wyoming	X	

Based on the results of the nine bond adequacy reviews performed, the OSM technical centers determined that bond amounts in six states—Alabama, Arkansas, Iowa, Oklahoma, Utah, and Wyoming—were inadequate to assure reclamation. For example, Iowa bonding regulations require applicants to submit detail and supporting calculations for their estimates of reclamation costs. The technical center noted during its review that applicants generally submitted only average cost/acre or lump sum amounts for total reclamation cost. The technical center further criticized the Iowa program because the state regulatory authority set bonds based on applicant estimates without any addition for costs the state would incur if it contracted for reclamation. The technical center reported that this represented a significant failure in the Iowa program and that the state regulatory authority had long recognized the severe underbonding situation that exists on Iowa mines. Iowa informed the field office that it would follow the bonding requirements in its approved program.

In the 10 states in which the state bonding process was reviewed, the OSM technical centers determined that the process in three states—Indiana, Montana, and North Dakota—was insufficient. For example, the Eastern Technical Center reported that the Indiana Administrative Code included a list of 14 bonding criteria that should, at a minimum, be considered by permit applicants in calculating the amount of performance bonds. However, the state's permit application form only asked the applicant to consider six. The technical center, in response to a field office request, recalculated the bond amount for six permits using the OSM "unit cost" method. This study, reported to the field office in July 1984, found that OSM's estimates were about $1,650 to $8,650 higher per acre than Indiana's. The technical center also reported that Indiana lowered bonds on several permits based on the operator's reclamation history, even though the center could find no regulatory or statutory authority for the state to reduce bond amounts for this reason. The field office reported that this resulted in reducing bond amounts by as much as $3,000 per acre.

The state regulatory authority contended that Indiana's approved bonding system included a supplemental operator's reclamation fund; however, the field office did not agree with this contention. The field office reported that, as a result of an August 8, 1984, meeting with the state, the state agreed to re-examine its bonding process and submit program modifications including new regulations.

Technical center oversight reports did not make evaluative comments about either the adequacy of bond amounts or the sufficiency of the bond setting system in four states for the following reasons.

- Alaska: The Western Technical Center oversight report stated that Alaska had not processed a mining application to the stage of bond setting so the report could only discuss the process of bond determination which would be used by the state.
- Missouri: The Western Technical Center permitting oversight report states that oversight evaluation of the new bonding system had to await OSM approval of the system under OSM regulations.
- West Virginia: The technical center evaluation team leader for the 1984 permitting oversight review told us that oversight review of individual permits was not useful in evaluating a bonding system such as that in West Virginia which relies on a fund to supplement bonds in the event of forfeiture.

- Virginia: The Eastern Technical Center reported only that bonds were submitted in Virginia but made no evaluative comments concerning the adequacy of the bond amounts or the bonding process used by the state.

Technical Center Special Studies of Bond Adequacy

The technical centers do special studies at the request of field office directors. The Eastern Technical Center made two special studies of the adequacy of bond amounts in 1984. One study developed bond estimates for six Indiana permits and the other study developed bond estimates for four Kentucky permits. The technical center compared its estimates to the state established bonds for both of these states. It found that 9 of the 10 bonds reviewed were set at amounts less than that which would have been established by OSM.

In March 1985, the Eastern Technical Center completed the field work on another special study to determine the adequacy of bond amounts established by eastern states without special funds that can be used to supplement forfeited bonds.[2] The study team recalculated bonds in Kentucky, Alabama, and Illinois. In each state, the study team recalculated the state established bond amounts on 10 bonds using the method outlined in the OSM Bonding Manual (February 1985 draft) developed for OSM by an engineering consultant. In addition, the study team was to (1) evaluate the state system for estimating bond amounts and to identify any deficiencies, (2) review the mining and reclamation plan to determine if all information required to estimate a reclamation bond amount is included in the permit application, and (3) determine if the state bond estimate adequately addressed all sub-activities of the reclamation process.

The Chief, Economic and Environmental Analysis Division, Eastern Technical Center, who is responsible for the bonding study told us that the study results will be included in the Eastern Technical Center 1985 permitting oversight reports for these three states as comparative information without conclusions or recommendations. He said that the technical center cannot comment on the adequacy of bond amounts based on such few calculations because there is too much disagreement as to how to calculate an adequate bond amount. He said the only true test of bond adequacy comes when the bond is forfeited and the state contracts for reclamation. He emphasized, however, that OSM believes its method of

[2]The Eastern Technical Center also looked at bonds in two states with special accounts—Ohio and West Virginia—to determine whether funds from these accounts would be needed to supplement performance bonds in the event of bond forfeiture.

bond calculation is defensible and produces useable results. For the three states, the technical center reported the following:

Alabama—The Eastern Technical Center's bond estimates were larger than the state established bonds. The technical center concluded that these results pointed out the need for further study of the state's as well as technical center's bonding procedures and adequacy.

Illinois—Bond amounts are adequate to cover the cost of reclamation in the event of a forfeiture.

Kentucky—The state regulatory authority's system consistently produces bond amounts for coal preparation plants and underground mines that are considerably less than site-specific cost estimates. For surface mines, the state's system produces bonds comparable to the center's for medium-sized mines. For small mines, state-calculated amounts are considerably less than the center's, and for large mines, state amounts are larger.

Actions Taken by OSM to Improve Bonding Oversight

As part of its effort to improve its procedures for conducting permitting evaluations, OSM has drafted new procedures to be followed in determining the adequacy of performance bonds in the technical center's 1986 permitting oversight reviews. These procedures will require an evaluation of all bonds submitted with the permits selected for oversight review. With respect to the review, the draft guidance states, in part that

"The procedures for setting bond amounts should be evaluated on the basis of whether or not it results in bond amounts that are adequate. Where bond amounts appear questionable, elements in the process that lack a defensible basis should be noted and discussed . . ."

Conclusions

Although OSM has a draft manual describing procedures for calculating bond amounts in those states in which it is the regulatory agency, OSM has not directed the technical centers to use these or similar procedures in performing bond oversight reviews. Thus, the OSM technical centers have not always evaluated the adequacy of bond amounts and were therefore unable to determine whether bonds established by the states were adequate to assure reclamation of mined lands.

OSM has developed draft guidelines which will require the technical centers to determine whether the bond amounts are adequate for all permits selected for oversight review. However, the guidelines do not address how this should be done. A standard procedure is needed for performing these reviews in a consistent manner including criteria for assisting the reviewer in deciding whether the bond amount is adequate.

Recommendation

We recommend that the Secretary of the Interior require the Director, OSM, to revise the draft bonding guidelines to incorporate procedures for determining the adequacy of reclamation performance bonds established by state regulatory authorities.

Mining Permits Issued by Primacy States As of December 31, 1984[a]

State	Permits Issued		
	New Applications	Reapplications	Total
Alabama	110	95	**205**
Alaska	0	0	**0**
Arkansas	10	28	**38**
Colorado	40	8	**48**
Illinois	50	33	**83**
Indiana	98	50	**148**
Iowa	14	9	**23**
Kansas	14	9	**23**
Kentucky	1,805	686	**2,491**
Louisiana	0	2	**2**
Maryland	87	30	**117**
Mississippi	0	0	**0**
Missouri	14	75	**89**
Montana	11	5	**16**
New Mexico	2	8	**10**
North Dakota	13	13	**26**
Ohio	122	264	**386**
Oklahoma	3	102	**105**
Pennsylvania	581	634	**1,215**
Texas	11	5	**16**
Utah	10	4	**14**
Virginia	492	2,677	**3,169**
West Virginia	1,491	1,279	**2,770**
Wyoming	15	7	**22**

[a]Data taken from OSM's fiscal year 1984 annual evaluation reports for each state and updated to December 31, 1984, by the OSM Evaluation Findings Fiscal Year 1984 Annual Report Update, dated February 1985.

Significant Dates in OSM's 1984 Oversight of State Permitting Activities

State	Technical Center			Field Office Report Date
	Advance Team Start Date	Evaluation Team Start Date	Final Report Date	
Alabama	11-15-83	11-28-83	4-19-84	11/26/84
Alaska	4-30-84	5-1-84	6-21-84	9/28/84
Arkansas	11-15-83	2-21-84	5-25-84	2/1/85
Colorado	11-7-83	12-19-83	2-2-84	9/5/84
Illinois	3-16-84	3-26-84	8-29-84	9/28/84
Indiana	3-12-84	4-9-84	6-18-84	2/1/85
Iowa	12-6-83	3-14-84	5-17-84	2/1/85
Kansas	12-1-83	1-31-84	4-20-84	1/23/85
Kentucky	1-17-84	1-30-84	7-6-84	9/5/84
Louisiana	2-6-84	2-28-84	9-13-84	1/23/85
Maryland	10-25-83	11-7-83	4-9-84	9/28/84
Missouri	10-31-83	12-12-83	3-2-84	12/20/84
Montana	10-13-83	12-12-83	3-9-84	9/5/84
New Mexico	12-2-83	4-3-84	7-20-84	1/7/85
North Dakota	10-27-83	1-22-84	6-19-84	11/26/84
Ohio	10-18-83	10-31-83	3-28-84	9/5/84
Oklahoma	10-27-83	12-4-83	2-27-84	1/7/85
Pennsylvania	12-13-83	1-9-84	9-25-84	1/10/85
Tennessee	3-19-84	4-10-84	9-10-84	2/1/85
Texas	11-9-83	1-31-84	6-27-84	1/10/85
Utah	10-17-83	1-9-84	4-20-84	1/7/85
Virginia	1-11-84	1-24-84	4-17-84	9/28/84
West Virginia	2-7-84	2-21-84	5-15-84	9/5/84
Wyoming	1-13-84	3-12-84	6-6-84	12/20/84

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